PENGARUH METODA DISTILASI DALAM PROSES *RECOVERY* MINYAK ATSIRI LIMBAH PADAT JAMU

THE EFFECT OF DISTILATION METHODS ON RECOVERY OF ESSENTIAL OIL FROM HERBAL SOLID WASTE

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ABSTRACT

The study about distillation methods toward solid waste herbal essential oil had purpose to determine the result of essential oil yield distillation recovery herbal solid waste and establish the constituents of essential oil result recovery the herbal solid waste with Gas Chromatography-Mass Spectrometer (GC-MS). It was already done in Chemical Laboratory, SWCU FSM Chemical Study Program from November 2014 until February 2015. The distillation methods to recovery the solid waste herbal essential oil was done in 3 methods such as water distillation, steam distillation, and water steam distillation in 24 hours. The yield result of the solid waste herbal essential oil is analyzed by using Randomized Completely Block Design (RCBD), 3 distillation methods as treatments while as the group was analysis period. The result showed that the essential oil yield was about 0,0763 ± 0,0033% until 0,1586 ± 0,0050 %. The water distillation methods was the best method, while steam distillation methods and water steam distillation methods was lower. GC-MS analysis result showed that the constituent of solid waste herbal steam distillation and water steam was composed by 3 major components of compound are 1,8 cineole 13,23 % and 11,74%, trans-caryophyllene about 6,92% and 7,98%, while trans-anethole with 5,36% and 5,32%. For the major compound water distillation was trans-caryophyllene about 4,50%.

Key words: *Essential oil, Herbal solid waste, Steam distillation, Water distillation, Water steam distillation*